

10/037,243 LLM

1/12/06

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	221	freimuth.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 16:58
L2	7383	zhang-y.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 16:58
L3	161	howitt.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 16:58
L4	1	(L1 and L2 and L3) and (expression adj vector)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 16:58
L5	7990	(protein or polypeptide or peptide) adj(solubility or folding)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:00
L6	1403	((protein or polypeptide or peptide) adj(solubility or folding)) with (improve or improved or enhanced or enhance or increase or increased or chaperon\$)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:02
L7	894	((protein or polypeptide or peptide) adj(solubility or folding)) near3 (improve or improved or enhanced or enhance or increase or increased or chaperon\$)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:05
L8	396	L7 and @ad<"20020104"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:05
L9	6	L8 and ((peptide or polypeptide or protein) adj (extension or tail or head))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:05

## EAST Search History

L10	553	((protein or polypeptide or peptide) adj(solubility or folding)) near3 (improve or improved or enhanced or enhance or increase or increased )	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:05
L11	8	L10 and ((peptide or polypeptide or protein) adj (extension or tail or head))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:07
L12	3	L11 and @ad<"20020104"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:07
L13	3831	L10 and (net adj charge) or (net adj negative adj charge)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:07
L14	60	L10 and ((net adj charge) or (net adj negative adj charge))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:07
L15	18	L14 and @ad<"20020104"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:07
L16	0	L15 and ((peptide or polypeptide or protein) adj (extension or tail or head))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:07
L17	1	L11 and ((net adj charge) or (net adj negative adj charge))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:07
L18	0	L17 and @ad<"20020104"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2007/01/12 17:07

Dialog 10/037,243  
LJM 1/12/2007

? ds

Set	Items	Description
S1	1853	S ((PROTEIN OR POLYPEPTIDE OR PEPTIDE) (3N) (SOLUBILITY OR FOLDING)) (5N) (IMPROVE OR IMPROVED OR ENHANCED OR ENHANCE OR INCREASE OR INCREASED)
S2	7	S S1 AND ((NET (W) CHARGE) OR (NET (W) NEGATIVE (W) CHARGE))
S3	4	RD (unique items)
S4	7	S S1 AND ((PEPTIDE OR POLYPEPTIDE OR PROTEIN) (2N) (EXTENSION OR TAIL OR HEAD))
S5	5	RD (unique items)
S6	4	S S5 NOT PD>020104
S7	0	S S6 AND ((NET (W) CHARGE) OR (NET (W) NEGATIVE (W) CHARGE))
S8	4	S S1 AND ((FUSION (W) PROTEIN) (S) ((PEPTIDE OR POLYPEPTIDE OR PROTEIN) (2N) (EXTENSION OR TAIL OR HEAD)))
S9	3	RD (unique items)

?

[File 172] EMBASE Alert 2007/Jan 12  
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[File 185] Zoological Record Online(R) 1978-2007/Jan  
(c) 2007 The Thomson Corp. All rights reserved.

[File 357] Derwent Biotech Res. 1982-2007/Jan W1  
(c) 2007 The Thomson Corp. All rights reserved.

[File 369] New Scientist 1994-2007/Oct W2  
(c) 2007 Reed Business Information Ltd. All rights reserved.

[File 370] Science 1996-1999/Jul W3  
(c) 1999 AAAS. All rights reserved.

\*File 370: This file is closed (no updates). Use File 47 for more current information.

[File 391] Beilstein Reactions 2006/Q4  
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[File 434] SciSearch(R) Cited Ref Sci 1974-1989/Dec  
(c) 2006 The Thomson Corp. All rights reserved.

[File 467] ExtraMED(tm) 2000/Dec  
(c) 2001 Informania Ltd. All rights reserved.

? s ((protein or polypeptide or peptide) (3N) (solubility or folding)) (5n) (improve or improved or enhanced or enhance or increase or increased)

Processing

Processing

Processing

9698554	PROTEIN
464973	POLYPEPTIDE
1919759	PEPTIDE
316905	SOLUBILITY
215071	FOLDING
1331552	IMPROVE
2044163	IMPROVED
1968903	ENHANCED
666726	ENHANCE
5829354	INCREASE
8215556	INCREASED

S1 1853 S ((PROTEIN OR POLYPEPTIDE OR PEPTIDE) (3N) (SOLUBILITY OR FOLDING)) (5N)  
(IMPROVE OR IMPROVED OR ENHANCED OR ENHANCE OR INCREASE OR INCREASED)

? s s1 and ((net (w) charge) or (net (w) negative (w) charge))

1853	S1
820756	NET
941736	CHARGE
9387	NET (W) CHARGE
820756	NET

3107517 NEGATIVE  
941736 CHARGE  
2481 NET (W)NEGATIVE (W)CHARGE  
S2 7 S S1 AND ((NET (W) CHARGE) OR (NET (W) NEGATIVE (W) CHARGE))

? rd  
>>W: Duplicate detection is not supported for File 391.  
Records from unsupported files will be retained in the RD set.  
S3 4 RD (UNIQUE ITEMS)

? t s3/medium/all

3/3/1 (Item 1 from file: 5) **Links**

Fulltext available through: [ScienceDirect \(Elsevier\)](#) [USPTO Full Text Retrieval Options](#) [SCIENCECIRECT](#)  
Biosis Previews(R)

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0011912459 Biosis No.: 199900172119

**Blood group typing by electrophoresis based on isoelectric focusing**

**Author:** Kane Masateru (Reprint); Nishimura Akiyoshi; Nishi Katsuji

**Author Address:** Department Legal Medicine, Shiga University Medical Science, Seta Tsukinowa-cho, Otsu 520-21, Japan\*\*Japan

**Journal:** Analytica Chimica Acta 383 ( 1-2 ): p 157-168 March 8, 1999 1999

**Medium:** print

**ISSN:** 0003-2670

**Document Type:** Article; Literature Review

**Record Type:** Abstract

**Language:** English

3/3/3 (Item 1 from file: 73) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCECIRECT](#)  
EMBASE

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03690479 EMBASE No: 1988139915

**Influence of surface charge on the solubility behaviour of porcine gamma globulin**

Mir M.M.; Fazili K.M.; Qasim M.A.

Department of Biochemistry, Faculty of Medicine, Aligarh 202001 India

Medical Science Research ( MED. SCI. RES. ) ( United Kingdom ) 1988 , 16/9 (463-464)

CODEN: MSCRE ISSN: 0269-8951

Document Type: Journal

Language: ENGLISH Summary Language: ENGLISH

3/3/4 (Item 1 from file: 357) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCECIRECT](#)  
Derwent Biotech Res.

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0375541 DBA Accession No.: 2005-21247

**Secretion of heterologous proteins in *Bacillus subtilis* can be improved by engineering cell components affecting post-translocational protein folding and degradation plasmid-mediated gene transfer; expression in *Bacillus subtilis* and cell component engineering for recombinant protein production and heterologous protein secretion**

**Author:** VITIKAINEN M; HYRYYLAINEN HL; KIVIMAKI A; KONTINEN VP; SARVAS M

**Corporate Affiliate:** Natl Publ Hlth Inst

**Corporate Source:** Sarvas M, Natl Publ Hlth Inst, Vaccine Dev Lab, Mannerheimintie 166, FIN-00300 Helsinki, Finland

**Journal:** JOURNAL OF APPLIED MICROBIOLOGY ( 99, 2, 363-375 ) 2005

**ISSN:** 1364-5072

**Language:** English

```

? s s1 and ((peptide or polypeptide or protein) (2n) (extension or tail or head))
Processing
Processing
    1853    S1
    1919759  PEPTIDE
    464973   POLYPEPTIDE
    9698554  PROTEIN
    660244   EXTENSION
    307152   TAIL
    997359   HEAD
    12271   ((PEPTIDE OR POLYPEPTIDE) OR PROTEIN) (2N) ((EXTENSION OR TAIL) OR HEAD)
S4          7   S S1 AND ((PEPTIDE OR POLYPEPTIDE OR PROTEIN) (2N) (EXTENSION OR TAIL OR
HEAD))

? rd
>>>W: Duplicate detection is not supported for File 391.
Records from unsupported files will be retained in the RD set.
S5          5   RD (UNIQUE ITEMS)

? s s5 not pd>020104
Processing
>>>W: One or more prefixes are unsupported
or undefined in one or more files.
    5   S5
    13812178 PD>020104
S6          4   S S5 NOT PD>020104

? S S6 AND ((NET (W) CHARGE) OR (NET (W) NEGATIVE (W) CHARGE))
    4   S6
    820756  NET
    941736  CHARGE
    9387   NET (W) CHARGE
    820756  NET
    3107517 NEGATIVE
    941736  CHARGE
    2481   NET (W) NEGATIVE (W) CHARGE
S7          0   S S6 AND ((NET (W) CHARGE) OR (NET (W) NEGATIVE (W) CHARGE))

?

? d s
Set      Items  Description
S1      1853   S ((PROTEIN OR POLYPEPTIDE OR PEPTIDE) (3N) (SOLUBILITY OR FOLDING)) (5N)
( IMPROVE OR IMPROVED OR ENHANCED OR ENHANCE OR INCREASE OR INCREASED)
S2      7     S S1 AND ((NET (W) CHARGE) OR (NET (W) NEGATIVE (W) CHARGE))
S3      4     RD (unique items)
S4      7     S S1 AND ((PEPTIDE OR POLYPEPTIDE OR PROTEIN) (2N) (EXTENSION OR TAIL OR
HEAD))
S5      5     RD (unique items)
S6      4     S S5 NOT PD>020104
S7      0     S S6 AND ((NET (W) CHARGE) OR (NET (W) NEGATIVE (W) CHARGE))

?
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? t s6/medium/all

6/3/1 (Item 1 from file: 5) [Links](#)

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Biosis Previews(R)

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0015652161 Biosis No.: 200510346661

Stabilizing peptide fusion for solving the stability and solubility problems of therapeutic proteins

**Author:** Lee Eui Nam; Kim Young Mok; Lee Hye Ja; Park Sang Woo; Jung Han Young; Lee Jae Myun; Ahn Yong-Ho; Kim Jongsun (Reprint)

**Author Address:** Yonsei Univ, Coll Med, Dept Microbiol, 134 Shinchon Dong, Seoul 120752, South Korea\*\*South Korea

**Author E-mail Address:** jkim63@yumc.yonsei.ac.kr

**Journal:** Pharmaceutical Research (Dordrecht) 22 ( 10 ): p 1735-1746 OCT 2005 2005

**ISSN:** 0724-8741

**Document Type:** Article

**Record Type:** Abstract

**Language:** English

6/3/2 (Item 1 from file: 34) [Links](#)

Fulltext available through: [John Wiley and Sons](#) [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)  
[SciSearch\(R\)](#) Cited Ref Sci

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05759143 **Genuine Article#:** WW140 **No. References:** 45

**Polymerization mechanism of polypeptide chain aggregation**

**Author:** Speed MA; King J; Wang DIC (REPRINT)

**Corporate Source:** AMGEN INC,1840 DEHAVILLAND DR/THOUSAND OAKS//CA/91320 (REPRINT);  
MIT,CTR BIOTECHNOL PROC ENGN/CAMBRIDGE//MA/02139

**Journal:** BIOTECHNOLOGY AND BIOENGINEERING , 1997 , V 54 , N4 ( MAY 20 ), P 333-343

**ISSN:** 0006-3592 **Publication date:** 19970520

**Publisher:** JOHN WILEY & SONS INC , 605 THIRD AVE, NEW YORK, NY 10158-0012

**Language:** English **Document Type:** ARTICLE ( ABSTRACT AVAILABLE )

6/3/3 (Item 1 from file: 357) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCECIRECT](#)  
Derwent Biotech Res.

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0203177 DBA Accession No.: 96-13948

**Strategies for achieving high-level expression of genes in Escherichia coli  
- gene expression, protein folding and recombinant protein secretion optimization; a review**

**Author:** Makrides S.C

**Corporate Affiliate:** T-Cell-Sci.

**Corporate Source:** Department of Molecular Biology, T Cell Sciences, Inc., 119 4th Avenue, Needham, MA 02194, USA.

**Journal:** Microbiol.Rev. ( 60, 3, 512-38 ) 1996

**ISSN:** 0146-0749 **CODEN:** MBRED3

**Language:** English

6/3/4 (Item 2 from file: 357) [Links](#)

Derwent Biotech Res.

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0076869 DBA Accession No.: 88-07718

**Studies on the intracellular aggregation and folding of recombinant beta-lactamase in E. coli  
- Escherichia coli protein secretion and aggregation in periplasmic space (conference abstract)**

**Author:** Bowden G; Tjelmeland K; +Georgiou G

**Corporate Source:** Department of Chemical Engineering, University of Texas, Austin, Texas 78712, USA.

**Journal:** Abstr.Pap.Am.Chem.Soc. ( 195 Meet., MBTD42 ) 1988

**CODEN:** ACSRAL

**Language:** English

? S S1 AND ((fusion (w) protein) (s)((PEPTIDE OR POLYPEPTIDE OR PROTEIN) (2N) (EXTENSION OR TAIL OR HEAD)))  
Processing  
Processing  
Processing  
1853 S1  
856027 FUSION  
9698554 PROTEIN  
1919759 PEPTIDE  
464973 POLYPEPTIDE  
9698554 PROTEIN  
660244 EXTENSION  
307152 TAIL  
997359 HEAD  
538 FUSION(W) PROTEIN(S) ((PEPTIDE OR POLYPEPTIDE) OR PROTEIN) (2N) ((EXTENSION OR TAIL) OR HEAD)  
S8 4 S S1 AND ((FUSION (W) PROTEIN) (S)((PEPTIDE OR POLYPEPTIDE OR PROTEIN) (2N) (EXTENSION OR TAIL OR HEAD)))

? rd  
>>>W: Duplicate detection is not supported for File 391.  
Records from unsupported files will be retained in the RD set.  
S9 3 RD (UNIQUE ITEMS)

? t s9/medium/free  
>>>E: Item 'free' is not a number

? t s9/medium/all

### 9/3/1 (Item 1 from file: 5) Links

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCECIRECT](#)

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0015652161 Biosis No.: 200510346661

### Stabilizing peptide fusion for solving the stability and solubility problems of therapeutic proteins

**Author:** Lee Eui Nam; Kim Young Mok; Lee Hye Ja; Park Sang Woo; Jung Han Young; Lee Jae Myun; Ahn Yong-Ho; Kim Jongsun (Reprint)

**Author Address:** Yonsei Univ, Coll Med, Dept Microbiol, 134 Shinchon Dong, Seoul 120752, South Korea\*\*South Korea

**Author E-mail Address:** jkim63@yumc.yonsei.ac.kr

**Journal:** Pharmaceutical Research (Dordrecht) 22 ( 10 ): p 1735-1746 OCT 2005 2005

**ISSN:** 0724-8741

**Document Type:** Article

**Record Type:** Abstract

**Language:** English

9/3/2 (Item 1 from file: 73) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCEDIRECT](#)  
EMBASE

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13361272 EMBASE No: 2005430023

**Stabilizing peptide fusion for solving the stability and solubility problems of therapeutic proteins**

Eui N.L.; Young M.K.; Hye J.L.; Sang W.P.; Han Y.J.; Jae M.L.; Ahn Y.-H.; Kim J.

J. Kim, Department of Microbiology, Brain Korea 21 Project of Medical Sciences, Yonsei University College of Medicine, Seoul South Korea

**Author Email:** jkim63@yumc.yonsei.ac.kr

Pharmaceutical Research ( PHARM. RES. ) ( United States ) 2005 , 22/10 (1735-1746)

**CODEN:** PHREE **ISSN:** 0724-8741

**Document Type:** Journal ; Article

**Language:** ENGLISH **Summary Language:** ENGLISH

**Number Of References:** 46